

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously Amended) An exposure apparatus which exposes a substrate through a mask formed with a pattern, said exposure apparatus comprising:

a stage which holds said mask and is moved by an actuator to move said mask in a direction on a predetermined plane substantially parallel to a pattern surface of said mask;

an acceleration detection device which detects information relating to acceleration of the stage; and

a control device which controls movement of said stage via said actuator based on a range of acceleration of said stage where an offset, in said predetermined plane, of said mask on said stage is not caused by movement of said stage so that the acceleration of said stage as based on the information detected by said acceleration detection device becomes within the range of acceleration of said stage.

2. (Previously Amended) An exposure apparatus which exposes a substrate through a mask formed with a pattern, said exposure apparatus comprising:

a stage which holds said mask and is moved by an actuator to move said mask in a direction on a predetermined plane substantially parallel to a pattern surface of said mask;

an acceleration detection device which detects information relating to acceleration of said stage;

a posture detection device which detects a posture of said mask on said stage;
and

a control device which checks the acceleration of said stage based on the information detected by said acceleration detection device and which initiates detection by said posture detection device when the acceleration of said stage becomes out of the range of acceleration of said stage where an offset, in said predetermined plane, of said mask on said stage is not caused by movement of said stage.

3. (Previously Amended) An exposure apparatus according to claim 2, which further comprises a posture adjustment device which adjusts the relative positional relationship between the mask on the stage and the substrate, and

adjusts the relative positional relationship of the mask and substrate so as to cancel out offset by said posture adjustment device when said control device judges that offset has occurred in the mask.

4. (Previously Amended) An exposure apparatus according to claim 1, which derives the range of acceleration by a process of trial and error by repeatedly detecting offset of said mask while increasing or decreasing the acceleration of the stage in steps.

5. (Previously Amended) An exposure apparatus according to claim 4, wherein the range of acceleration is derived at least at one of a time of startup of said exposure apparatus and a time of exchange of said mask.

6. (Previously Amended) An exposure apparatus according to claim 1, further comprising a storage device which stores the range of acceleration of said stage.

7. (Previously Amended) An exposure apparatus according to claim 1, wherein:
said apparatus further comprises a sensor which detects information relating to a capability of said stage to hold said mask; and
said control device changes said range of acceleration in accordance with said information.

8. (Previously Amended) An exposure method for exposing a substrate through a mask formed with a pattern, said exposure method comprising:

holding said mask or said substrate by a stage moved via an actuator to move said mask or said substrate in a direction on a predetermined plane substantially parallel to a surface thereof;

determining a range of acceleration of said stage where an offset, in said predetermined plane, of said mask or said substrate on said stage is not caused due to acceleration or deceleration of the stage; and

performing exposure while controlling the movement of said stage via said actuator based on the range of acceleration so that the acceleration of said stage becomes within the range of acceleration.

9. (Previously Amended) An exposure method for exposing a substrate through a mask formed with a pattern, said exposure method comprising:

holding said mask or said substrate by a stage moved via an actuator to move said mask or said substrate in a direction on a predetermined plane substantially parallel to a surface thereof;

determining a range of acceleration of said stage where an offset, in said predetermined plane, of said mask or said substrate on said stage is not caused due to acceleration or deceleration of the stage;

detecting information relating to acceleration of said stage; and

detecting a posture of said mask or said substrate on said stage when the acceleration of said stage as based on said detected information becomes out of the range of acceleration.

10. (Previously Amended) An exposure method according to claim 9, further comprising performing processing to notify an operator when judging that the offset has occurred in the mask or substrate.

11. (Previously Amended) An exposure method according to claim 8, further comprising:

detecting information relating to the capability of the stage to hold the mask;

and

changing the range of acceleration in accordance with the information.

12. (Previously Amended) An exposure apparatus which exposes a substrate through a mask formed with a pattern, said exposure apparatus comprising:

a stage which holds said mask and is moved by an actuator to move said mask in a direction on a predetermined plane substantially parallel to a pattern surface of said mask;

an acceleration detection device which detects information relating to acceleration of said stage;

a posture adjustment device which adjusts a relative positional relationship between said mask and said substrate;

a storage device in which offset information showing the relationship between the acceleration of the stage and an offset, in said predetermined plane, of the mask on the stage caused by movement of said stage is stored; and

a control device which retrieves from said storage device the offset information corresponding to the acceleration of the stage based on the information detected by said acceleration detection device and adjusts a relative positional relationship between said mask and said substrate based on the retrieved offset information by said posture adjustment device so as to compensate the offset of the mask on the stage.

13. (Previously Amended) An exposure method for exposing a substrate through a mask formed with a pattern, said exposure method comprising:

holding said mask or said substrate by a stage moved via an actuator to move said mask or said substrate in a direction on a predetermined plane substantially parallel to a surface thereof;

determining information showing the relationship between the acceleration of said stage and an offset, in said predetermined plane, of said mask or said substrate on the stage caused due to acceleration or deceleration of said stage; and

detecting information relating to acceleration of said stage to obtain offset information corresponding to the acceleration of said stage based on the determined information and the detected information and adjusting a relative positional relationship between said mask and said substrate based on the obtained offset information so as to compensate the offset of said mask or said substrate.

14. (Canceled.)

15. (Currently Amended) An exposure apparatus which exposes a substrate through a mask formed with a pattern, said exposure apparatus comprising:

a stage which holds said mask and is moved by an actuator to move said mask in a direction on a predetermined plane substantially parallel to a pattern surface of said mask;

a detection device which detects information relating to acceleration of said stage; and

a control device which ~~obtains~~determines information relating to an offset, in said predetermined plane, of said mask on said stage caused by movement of said stage based on the detected information and information showing the relationship between the acceleration of said stage and the offset of said mask and adjusts a relative positional

relationship between said mask and said substrate based on the determined information so as to compensate the offset of said mask on said stage, and which performs at least one of an operation for recovery from exposure error and notification of said exposure error when judging based on the ~~obtained~~determined information, that said exposure error occurs due to said offset.

16. (Previously Amended) An exposure apparatus according to claim 2, which derives the range of acceleration by a process of trial and error by repeatedly detecting the offset of said mask while increasing or decreasing the acceleration of the stage in steps.

17. (Previously Amended) An exposure apparatus according to claim 2, further comprising a storage device which stores the range of acceleration of said stage.

18. (Previously Amended) An exposure apparatus according to claim 2, wherein:
said apparatus further comprises a sensor which detects information relating to a capability of said stage to hold said mask; and
said control device changes said range of acceleration in accordance with said information.

19. (Previously Amended) An exposure method according to claim 9, further comprising:
detecting information relating to the capability of the stage to hold the mask;
and
changing the range of acceleration in accordance with the information.

20. (Previously Added) An exposure apparatus according to claim 1, wherein:
said mask is held by suction at a portion of said pattern surface of said mask on said stage; and
said range of acceleration of said stage is determined based on the suction holding force to said mask by said stage.

21. (Previously Added) An exposure apparatus according to claim 20, wherein said control device changes said range of acceleration of said stage in accordance with fluctuates in the suction holding force to said mask by said stage.

22. (Previously Added) An exposure apparatus according to claim 20, wherein said control device changes said range of acceleration of said stage in accordance with fluctuates in installation environment or aging factors of said stage.

23. (Previously Added) An exposure apparatus according to claim 2, wherein said control device notifies an operator of the fact that said checked acceleration becomes out of said range of acceleration of said stage or that said offset is caused by the movement of said stage.

24. (Previously Added) An exposure method according to claim 8, wherein:
said mask is held by suction at a portion of said pattern surface of said mask on said stage; and
said range of acceleration of said stage is determined based on the suction holding force to said mask by said stage.

25. (Previously Added) An exposure method according to claim 24, wherein said range of acceleration is changed in accordance with fluctuations in the suction holding force to said mask by said stage.

26. (Previously Added) An exposure method according to claim 24, wherein said range of acceleration is changed in accordance with fluctuations in installation environment or aging factors of said stage.

27. (Previously Added) An exposure method according to claim 9, further comprising adjusting a relative positional relationship between said mask and said substrate when judging based on said detected posture, that said offset is caused by movement of said stage.